

Amendment To The Claims:

Below is a listing of claims that will replace all prior versions and listings of claims in the present patent application.

1. (Currently Amended) A receiver circuit, comprising:

a transmit/receive (T/R) switch for blocking high voltages and for converting voltage signals to current signals, said switch comprising first and second signal terminals and a control terminal, wherein said switch is connected at the second terminal to a low-noise amplifier and exhibits an ON resistance when closed, and wherein said ON resistance controlled by an electric value at said control terminal; and

a control circuit coupled to said switch at said control terminal for controlling said electric value and said ON resistance of said switch in closed mode in order that only low-voltage pulses are passed to the low-noise amplifier circuit, wherein said control circuit is a servo-loop circuit for generating an electric value at said control terminal of said switch when closed.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The receiver circuit of claim 1, wherein the low-noise amplifier circuit requires an input resistance and a feedback resistance, and further wherein said ON resistance of said switch is the input resistance of said low-noise amplifier circuit.

5. (Canceled)

6. (Currently Amended) The receiver circuit of claim 1 [[5]], wherein said servo-loop circuit comprises:

a current source having an input terminal and an output terminal;

a master switch, said master switch having an ON resistance and a control terminal responsive to an electrical value, said master switch is coupled to said output terminal of the current source, whereby a current I_{REF} is passed through said master switch and said electrical value at the control terminal of the master switch is capable of adjusting the voltage across said switch when closed to match a reference voltage V_{REF} ;

said switch utilizing said electrical value at said control terminal of said master switch.

7. (Currently Amended) The receiver circuit of claim 1 [[5]], wherein said servo-loop circuit comprises a single switch with the electrical value at the controlling terminal adjustable during system idle time.

8. (Currently Amended) A receiver circuit, comprising:

a T/R switch for blocking high voltages and for converting voltage signals to current signals, said T/R switch comprising first and second signal terminals, and a control terminal, said switch exhibiting an ON resistance when closed;

a low-noise amplifier circuit coupled to the T/R switch in order to amplify low-voltage pulses received from the switch while minimizing electronic noise, wherein said amplifier circuit requires an input resistance and a feedback

resistance, and wherein said input resistance is said ON resistance of said T/R switch; and

a control circuit which provides a control signal to said control terminal, wherein said control circuit is a servo-loop circuit for generating an electric value at said control terminal of said switch when closed.

9. (Previously Presented) The receiver circuit of claim 8, wherein the control circuit controls said ON resistance of said switch in closed mode.

10. (Canceled)

11. (Currently Amended) The receiver circuit of claim 8 [[9]], wherein said servo-loop circuit comprises:

a current source having an input terminal and an output terminal;

a master switch, said master switch having an ON resistance and a control terminal responsive to an electrical value, said master switch is coupled to said output terminal of the current source, whereby a current I_{REF} is passed through said master switch and said electrical value at the control terminal of the master switch is capable of adjusting the voltage across said switch when closed to match a reference voltage V_{REF} ;

said switch utilizing said electrical value at said control terminal of said master switch.

12. (Currently Amended) The receiver circuit of claim 8 [[9]], wherein said servo-loop circuit comprises a single switch with the electrical value at the controlling terminal adjustable during system idle time.

13. (Currently Amended) A method of controlling voltage pulses, the method comprising the steps of:

providing a receiver circuit having a Transmit/Receive switch, a low noise amplifier and a control circuit, said switch comprising first and second signal terminals and a control terminal in electrical communication to the control circuit, and exhibiting an ON resistance when closed, said ON resistance controlled by an electric value at said control terminal provided by said control circuit, wherein said control circuit provided by the providing step is a servo-loop circuit for generating the electrical value at the control terminal of said switch when closed;

receiving voltage pulses at the first signal terminal;

blocking high voltages applied to a transducer and passing only low-voltage pulses through said switch;

converting said low-voltage signals to current signals using said switch;
and

controlling said ON resistance of said switch when closed using said control circuit.

14. (Canceled)

15. (Previously Presented) The method of claim 13, wherein said switch provided by the providing step is a transmit/receive switch which is open during a transmission time interval and closed during a reception time interval, said switch passing only the low-voltage pulses.

16. (Currently Amended) The method of claim 13 [[14]], wherein the low-noise amplifier requires an input resistance; and further wherein said ON resistance exhibited by said switch in the providing step is the input resistance of said low-noise amplifier.

17. (Canceled)

18. (Currently Amended) The method of claim 13 [[17]], wherein said servo-loop circuit provided by the providing step comprises:

a current source having an input terminal and an output terminal;

a master T/R switch, said switch having an ON resistance and a control terminal responsive to an electrical value, said master T/R switch is coupled to said output of the current source, whereby a current I_{REF} is passed through said master switch and said electrical value at the control terminal is capable of adjusting the voltage across said switch to match a reference voltage V_{REF} ;

said switch utilizing said electrical value at control terminal of said master switch.

19. (Original) The method of claim 18, further comprising the step of providing a servo-loop circuit comprising a single T/R switch with the electrical value at the control terminal adjustable during system idle time.